

5 Things

You need to Know about the

ABDOMEN

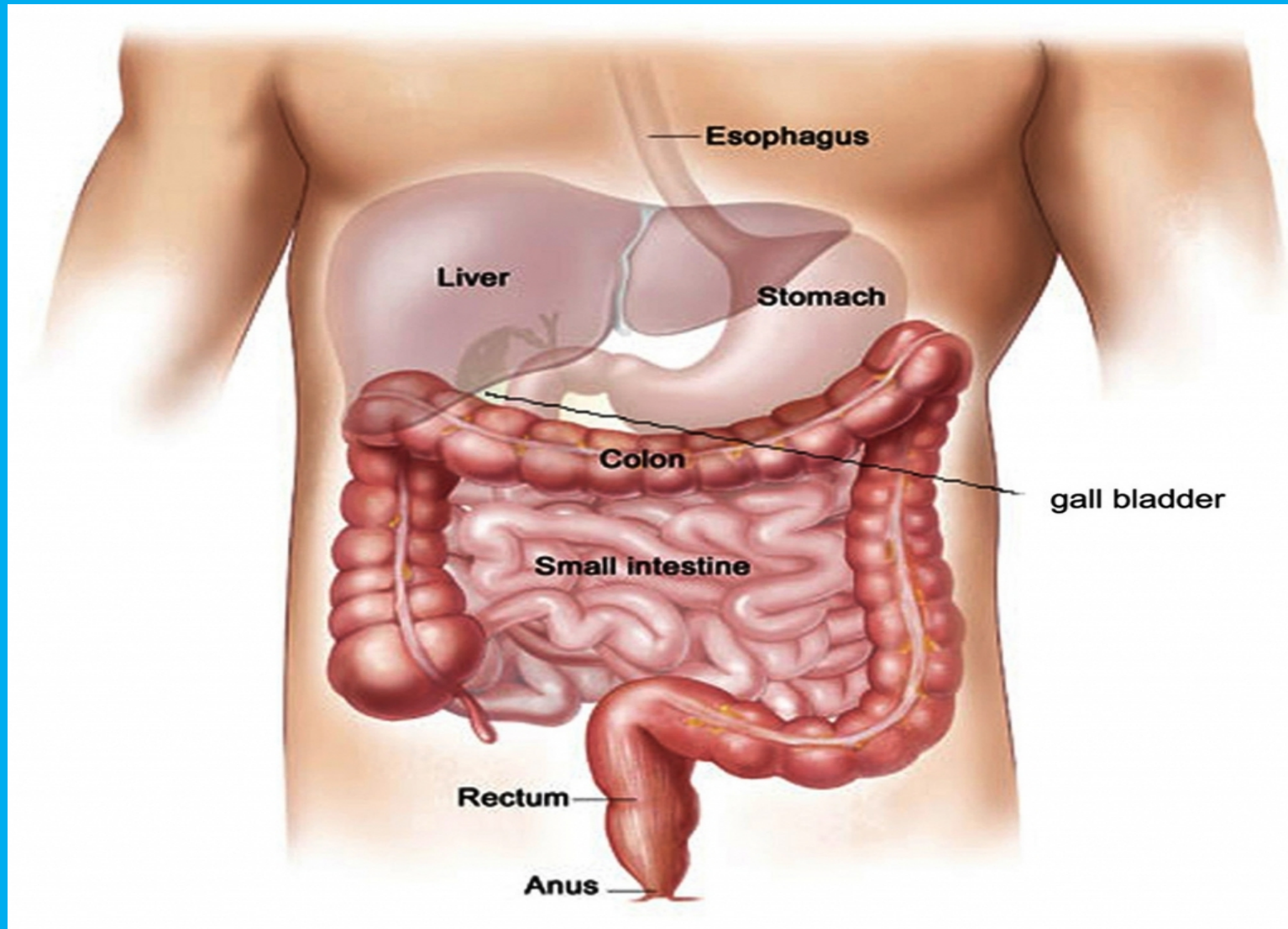
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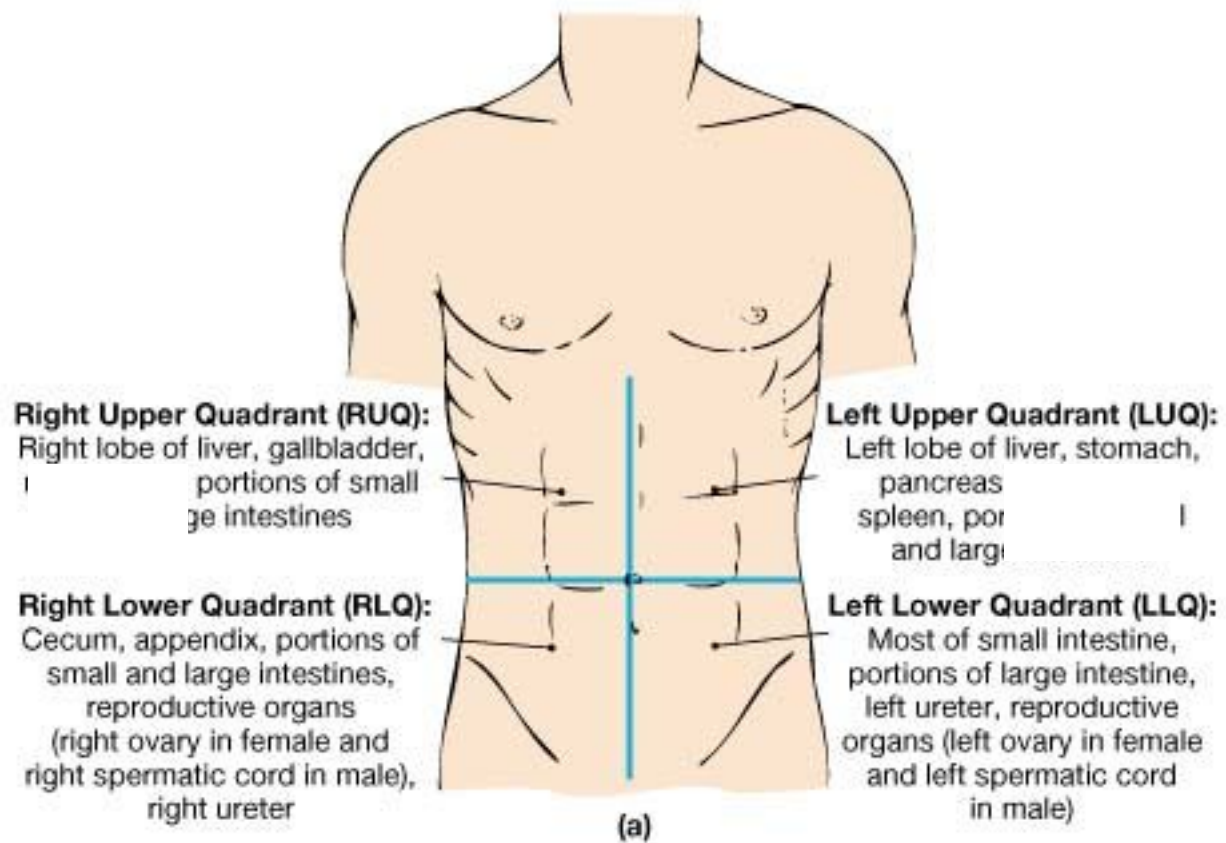
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P/IC/C*

Adapted from Jones and Bartlett "Emergency Care of the Sick and Injured 11th Edition

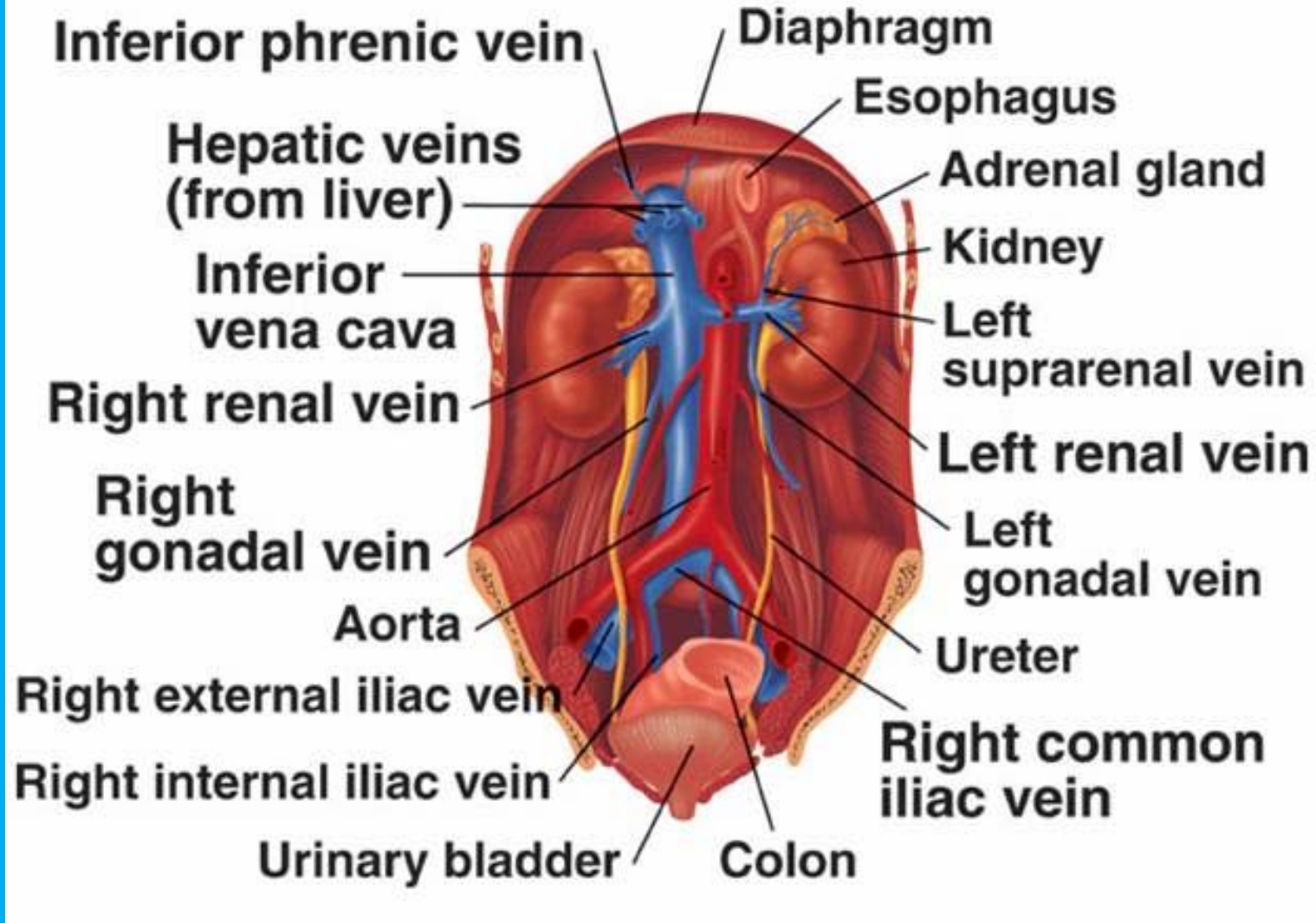
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#1. WHERE EVERYTHING IS

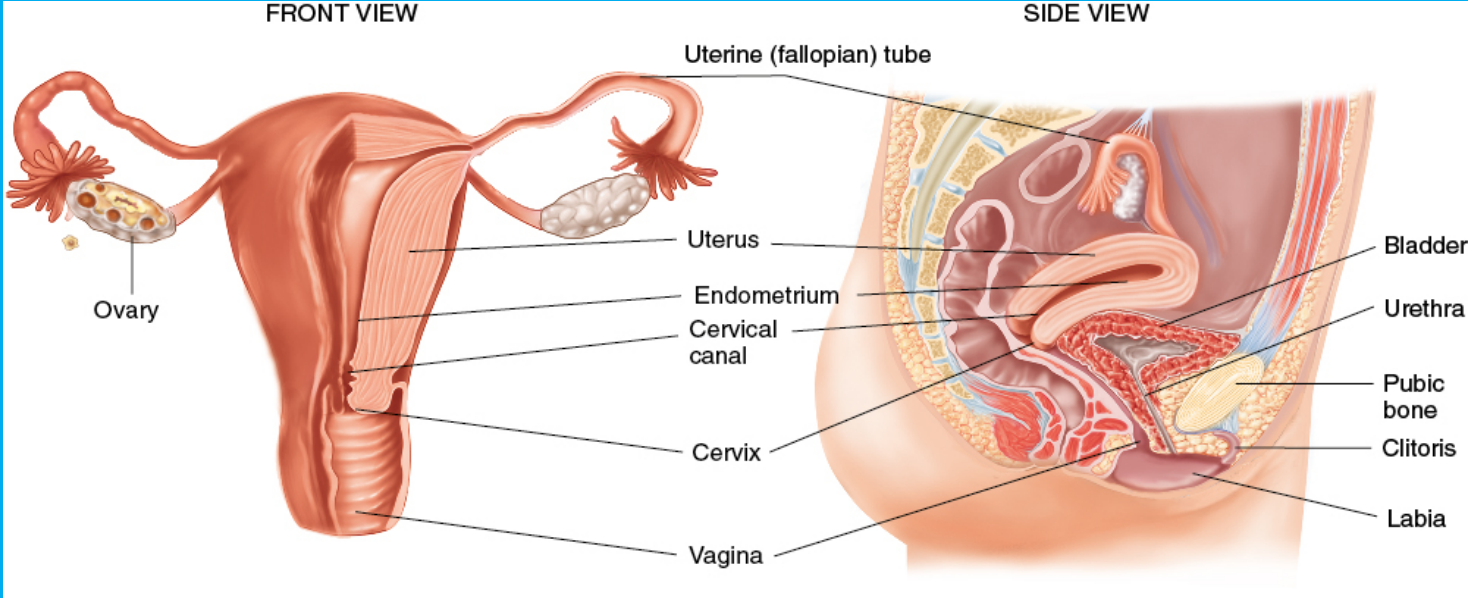




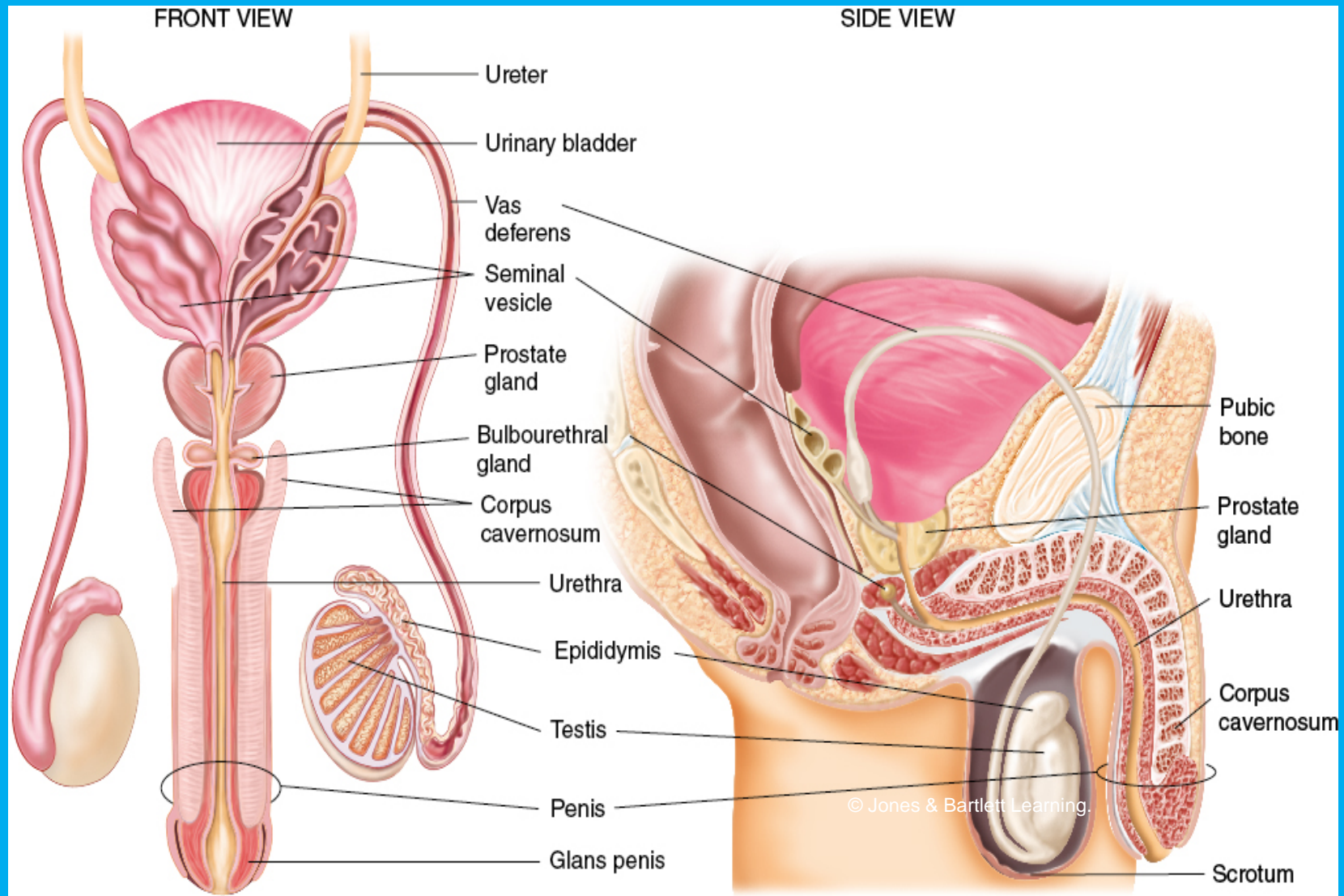
• **FIGURE 1-8** **Abdominopelvic Quadrants and Regions.** (a) Abdominopelvic quadrants divide the area into four sections. These terms, or their abbreviations, are most often used in clinical discussions.



Anatomy of the Genitourinary System (3 of 3)



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#2. PEE, POOP, BLOOD, and ACID

- The abdomen contains HOLLOW organs, SOLID organs, and a rich blood supply
- When injured, what's inside can get outside into the abdominal or pelvic cavities
- Up to FIVE LITERS of blood can “hide” in the abdominal cavity
- Fecal contents or urine can cause massive infection outside their respective organs
- Stomach Acid has a pH of 1.5 – 3.5 (yikes!)

#3. IF YOU KNOW WHAT'S NORMAL,
YOU'LL RECOGNIZE ABNORMAL

Soft and non-tender = GOOD

Anything else = BAD

PATHOPHYSIOLOGY MATTERS

Pain
Tenderness
“Rebound”
Nausea
Vomiting
Diarrhea/Constipation
Bloating/distension
Rigidity
Guarding
Masses
Wounds
Discoloration



4. SEE ME, FEEL ME, TOUCH ME, TALK TO ME

- Expose/Inspect
- Auscultate (for what it's worth)
- Palpate/Touch (but not too lightly!)
- The future = Prehospital ultrasound
- Pain management myths (ALS)



Cullen's Sign



Grey-Turner Sign



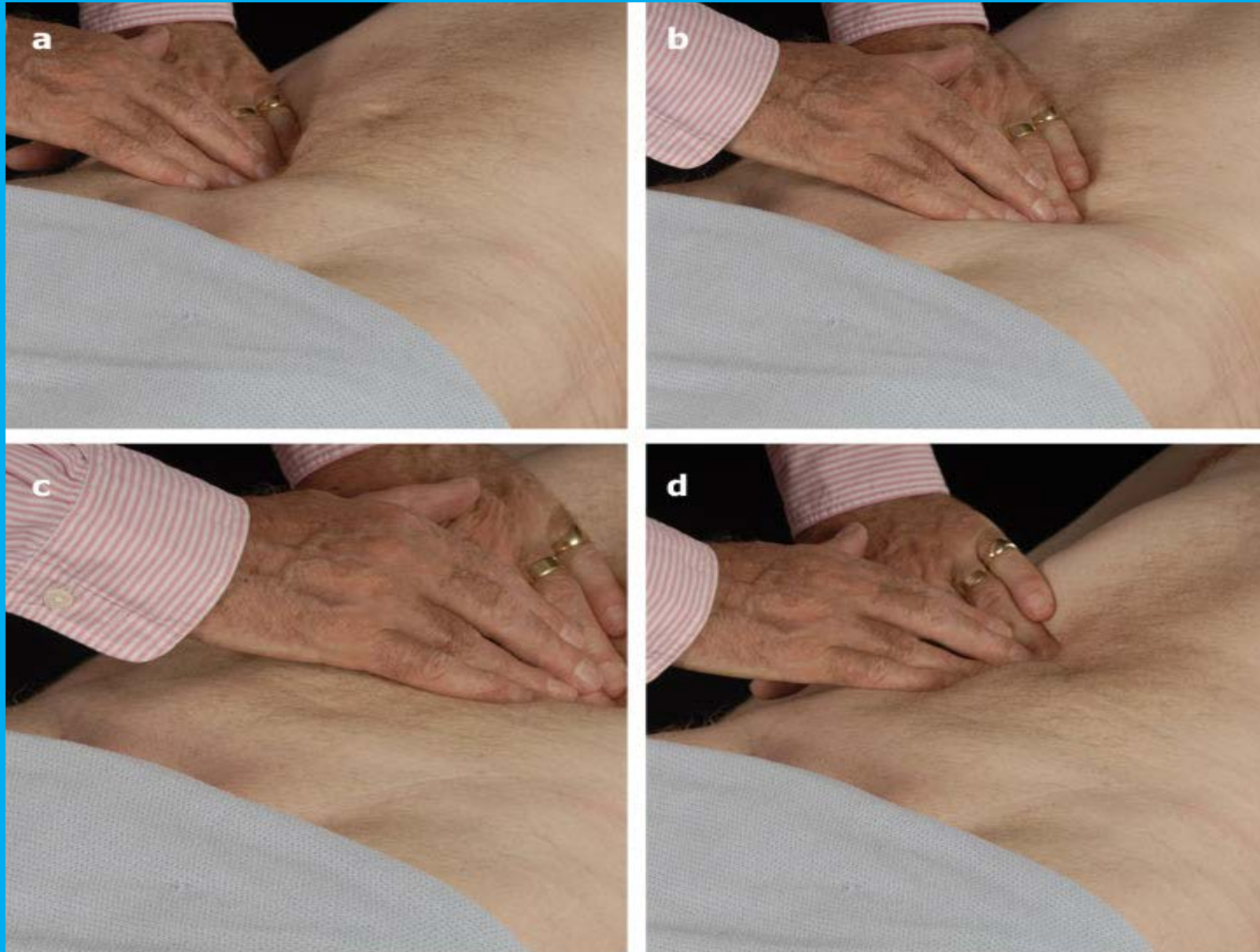


Figure 29 a,b,c,d. Deep abdominal palpation.

- Note the position of the patient.
- Clarify the chief complaint and MOI
- OPQRST
- Ask if there is nausea, vomiting, or diarrhea
- Ask about appearance of any bowel movements and urinary output
- Blood in the urine or black, tarry stools

- Recognize early signs/symptoms of shock
- Repeat vital signs frequently
- Watch for trends
- The patient you had at the beginning of the call is not the patient you have now
- Keep looking

#5. YES, YOU DIAGNOSE

- Good history and physical = More precise differential diagnosis
- Don't overthink, but don't refuse to think
- Use good clinical judgment based on anatomy and physiology and pathophysiology (it's not "doctor stuff")
- "Diesel bolus" is NOT treatment
- Make the right transport decision
- Follow up = Learning

Review

1. Peritonitis would MOST likely result following injury to the:
 - A. liver.
 - B. spleen.
 - C. kidney.
 - D. stomach.

Review

Answer: D

Rationale: In general, solid organs bleed when injured and hollow organs spill their contents into the abdominal cavity, resulting in peritonitis—inflammation of the intra-abdominal lining. Of the choices listed, the stomach is the only hollow organ.

Review

2. Which of the following organs would be the MOST likely to bleed profusely if severely injured?
- A. Liver
 - B. Kidney
 - C. Stomach
 - D. Gallbladder

Review

Answer: A

Rationale: The liver is a highly vascular solid organ, and contains approximately 40% of the body's total blood volume at any given time. If severely injured, bleeding from the liver would be profuse and rapid. Other solid organs, such as the spleen and kidneys, may also produce severe bleeding if injured, though not as rapidly as the liver. The stomach and gallbladder are hollow organs; if lacerated, they would spill their contents into the abdominal cavity, resulting in peritonitis.

Review

3. Which of the following statements regarding intra-abdominal bleeding is FALSE?
- A. Intra-abdominal bleeding often causes abdominal distention.
 - B. Intra-abdominal bleeding is common following blunt force trauma.
 - C. The absence of pain and tenderness rules out intra-abdominal bleeding.
 - D. Bruising may not occur immediately following blunt abdominal trauma.

Review

Answer: C

Rationale: Intra-abdominal bleeding is common following blunt trauma to the abdomen. Signs include abdominal distention; rigidity; bruising (may not occur immediately); and, in some cases, pain to palpation. However, unlike gastric juices and bacteria, blood within the abdominal cavity does not provoke an inflammatory response; therefore, the absence of pain and tenderness does *not* rule out internal bleeding.

Review

4. Even when seatbelts are worn properly and the airbags deploy, injury may occur to the:
- A. chest.
 - B. extremities.
 - C. iliac crests.
 - D. lower ribcage.

Review

Answer: C

Rationale: Seatbelts should be positioned over the iliac crests of the pelvis. If they are positioned higher, significant intra-abdominal injury can occur. Even when seatbelts are properly positioned and the airbags deploy, injury to the iliac crests may occur as the locking mechanism of the seatbelt engages during a motor vehicle crash that involves rapid deceleration.

Review

5. While inspecting the interior of a wrecked automobile, you should be MOST suspicious that the driver experienced an abdominal injury if you find:
- A. a deformed steering wheel.
 - B. that the airbags deployed.
 - C. a crushed instrument panel.
 - D. damage to the lower dashboard.

Review

Answer: A

Rationale: Airbags save lives when used in conjunction with *properly worn seatbelts*. Unfortunately, however, not all drivers wear their seatbelts. If unrestrained, the driver's abdomen may strike the steering wheel, resulting in significant trauma. Suspect this if you lift the airbag and note that the lower part of the steering wheel is deformed.

Review

6. Other than applying a moist, sterile dressing covered with a dry dressing to treat an abdominal evisceration, an alternative form of management may include:
 - A. placing dry towels over the open wound.
 - B. cleaning the exposed bowel with sterile saline.
 - C. applying the PASG to stop the associated bleeding.
 - D. applying an occlusive dressing, secured by trauma dressings.

Review

Answer: D

Rationale: Although the preferred management for an abdominal evisceration includes the application of a moist, sterile dressing covered by a dry dressing, protocols in some EMS systems call for an occlusive dressing, secured by trauma dressings. An occlusive dressing may help prevent the loss of body heat through the abdominal wound.

Review

7. You are transporting a patient with possible peritonitis following trauma to the abdomen. Which position will he MOST likely prefer to assume?
- A. Sitting up
 - B. Legs drawn up
 - C. Legs outstretched
 - D. On his right side

Review

Answer: B

Rationale: Patients with peritonitis often lie very still and tend to have their legs drawn up into the abdomen. This relieves strain on the abdominal muscles and may provide pain relief.

Review

8. A 16-year-old boy was playing football and was struck in the left flank during a tackle. His vital signs are stable; however, he is in severe pain. You should be MOST concerned that he has injured his:
- A. liver.
 - B. spleen.
 - C. kidney.
 - D. bladder.

Review

Answer: C

Rationale: The flanks are located laterally in the back and overlie the kidneys. During football, spearing injuries occur when a player is struck in the flank by another player's helmet. This can result in injury to the kidney ranging from bruising to severe bleeding. Injury to the liver, spleen, and bladder would more likely occur following blunt trauma to the anterior abdomen.

Review

9. The term “hematuria” is defined as:
- A. blood in the stool.
 - B. blood in the urine.
 - C. vomiting up blood.
 - D. urinary bladder rupture.

Review

Answer: B

Rationale: Blood in the urine is called hematuria. Following trauma, the presence of hematuria suggests injury to the urinary bladder or kidneys. Bright red blood in the stool is called hematochezia; dark, tarry stools are called melena. Vomiting up blood is called hematemesis.

Review

10. When caring for a female with trauma to the external genitalia, the EMT should:
- A. use local pressure to control bleeding.
 - B. carefully pack the vagina to reduce bleeding.
 - C. remove any impaled objects from the vagina.
 - D. cover any open wounds with moist, sterile dressings.

Review

Answer: A

Rationale: Bleeding from the external genitalia should be controlled by applying a dry, sterile dressing and local direct pressure. Never pack anything into the vagina to try to control bleeding; this increases the risk of infection, and anything you place into the vagina will only need to be removed at the hospital. Impaled objects in the genitalia should be carefully stabilized in place, not removed.